4 Transportation

Introduction and Background

The transportation element of the Murray City General Plan deals with current and future transportation issues and opportunities in Murray City. The future of Murray is exciting, and with opportunities such as light rail transit and commuter rail, now is an opportune time to examine how the transportation system can support the goals for the future of the City.

In many ways, Murray is the hub of the Salt Lake Valley. With both north/south and east/west interstates, three light rail transit stops, and a future commuter rail station tied into one of the existing light rail transit stops, Murray offers a crossroads of both roads and transit. Geographically, Murray lies about midway between the north and south Salt Lake County lines. With booming residential development in the southwest part of the Salt Lake Valley, Murray offers employers and employees an alternative to driving to downtown Salt Lake City. Murray already hosts regional-level commercial venues such as Fashion Place Mall and Cottonwood Hospital. A new Costco has just opened and construction will begin soon on a new IHC Hospital.

As with other sections of the plan document, the transportation element focuses its analysis and recommendations around the four strategies of focusing on the core area of I-15 to State Street, utilizing mass transit and general transit-oriented development, preserving residential neighborhoods, and implementing appropriate land use transitions. These four principles and their relationship to the transportation system and the plan's recommendations are discussed in more detail in the "Transportation Analysis" section.

Identified Transportation Issues

Through several public scoping meetings held early in the planning process, Murray City residents identified a variety of transportation issues. These issues include:

- Increased traffic volumes on Winchester Street and the traffic issues associated with increased commercial development in the corridor,
- The impacts of improvements to 300 West,
- Traffic congestion on State Street including the 5300 South intersection,
- The need for improvements in bicycle and pedestrian facilities and linkages,
- and traffic congestion spillover into residential neighborhoods.

Existing Transportation Conditions

Functional Classification

Functional classification is a way of describing roads in terms of their size and function, i.e. whether they offer more access, such as a local street, or emphasize mobility, such as a freeway or arterial. While there has been some degree of standardization of the various functional classes, municipalities are free to apply different standards to each classification and interpret them in a way that is most beneficial to the particular needs of their city.

The functional classification system offered in this plan varies somewhat from the typical functional classifications in that it separates the standard "arterial" and "collector" classifications into two different types: community and regional designations for each. The purpose of this is to allow Murray City the

opportunity to step outside the typical standards for each of these classifications and to allow the City to be more creative in the design for each type of facility. In many ways, it is the homogenous use of the "arterial" classification from city to city that has made suburban cities indistinguishable from one another. Having a "community arterial" classification offers Murray City the opportunity to set itself apart from other Salt Lake County cities by shaping its transportation system to fit its needs and to define its identity by creative application of the functional classification system. While the differences between this system and the typical functional class system might be largely semantic, it still offers the City options in defining an arterial, for example, rather than a typical UDOT arterial cross-section.

The functional classifications in Murray are: **freeway, regional arterial, community arterial, community collector and neighborhood collector streets**. Although the characteristics within any single functional classification may show great variation, the use of the functional classification system is important for two reasons. First, Murray City mimics the regional pattern of functional classification which calls for larger streets as part of a regional transportation system serving a progressive network of smaller streets serving the local land use system. This regional pattern has advantages in terms of isolating neighborhoods from regional traffic patterns but also has disadvantages in terms of limiting more walkable and transit oriented development. Second, the use of functional classifications in the planning process allows roads to be viewed in terms of their role in serving local development. The design characteristics and cross sections may vary greatly within a single functional classification, but the role of the street in terms of facilitating land use development and the trade-offs of land access and circulation will be common within each classification.

Freeways serve to provide movement with as little interference as possible. The Utah State Department of Transportation (UDOT) controls the design characteristics and locations of interchanges and all access points on all freeways including I-15 and I-215 through Murray. Murray City's input on freeway decisions is somewhat limited since the primary objective of the freeway system is to move large volumes of people at high speeds and long distances.

Regional arterials connect and augment freeways, providing faster movement for regional traffic than other surface streets but still providing some access to land development. Murray City has land use development approval on these regional arterial streets but UDOT maintains approval over curb cuts and access points. UDOT also controls the cross-section and design features of these facilities, which often reduces design creativity. Existing regional arterial streets include Van Winkle Expressway, 4500 South and 5300 South west of State Street. In general, UDOT recommends and programs improvements on these streets consistent with Murray City's interest in maintaining good traffic flow throughout Murray City and connecting Murray to its neighbors.

Community arterials are generally similar to regional arterials in design characteristics. However, the balance of function on these streets is tilted towards circulation within Murray as opposed to movement through Murray. For this reason, design characteristics may vary from a "standard" cross-section and must be provided to accommodate the desires of Murray as well as standard engineering principles. Land uses along these roads may include both regional community draws but travel patterns should be limited to approximately two miles. Design characteristics on these streets begin to favor access to land over long distance travel and also encompass the shorter distance needs of pedestrian, mass transit, and non-motorized travel modes as opposed to single occupant vehicles. However, single occupant vehicle capacity is still important on these streets so that a partnership between UDOT and Murray City must continue to be fostered.

Community collector and neighborhood collector streets are completely outside of the UDOT State Highway System such that roadway design and land permitting are completely within the control of Murray

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City. Community collector streets may link more than one neighborhood while neighborhood collector streets primarily serve a single neighborhood. Both of these streets need to be planned such that travel speeds are secondary compared with serving access to adjacent land. These streets should not be planned to serve regional land uses, but are extremely important in serving the local land uses of Murray City residents and employees. Figure 4-1 shows Murray City functional street classifications.

Figure 4-1
Murray City Street Functional Classifications



Traffic Volumes

Traffic volumes in Murray have increased on both higher and lower functioning facilities, such as Interstate 15 and Murray Parkway Avenue. While volumes on I-15 do not necessarily affect local streets in Murray directly, when I-15 becomes congested, city streets such as State Street and 700 West contain the spillover traffic. Table 4-1 gives 1990 and 2001 Average Annual Daily Traffic (AADT) volumes recorded by the Utah Department of Transportation.

The completion of I-15 has de-emphasized the role of State Street as a regional alternative to I-15. Local approved but pending land uses such as the IHC hospital and various retail attractions near the intersection of State Street and 5300 South are expected to create continued traffic problems on State Street, particularly near 5300 South. Figure 4-2 illustrates the growth of 5300 South, 5600 South, 5900 South and State Street in comparison to other streets in the Salt Lake Valley. Construction of Cottonwood Street and emphasis on light rail transit together with future implementation of commuter rail will all help to slow the growth in traffic congestion on freeways and lessen the spillover impact on Murray streets.

Table 4-1
Change in AADT on Murray City Streets: 1990 to 2001

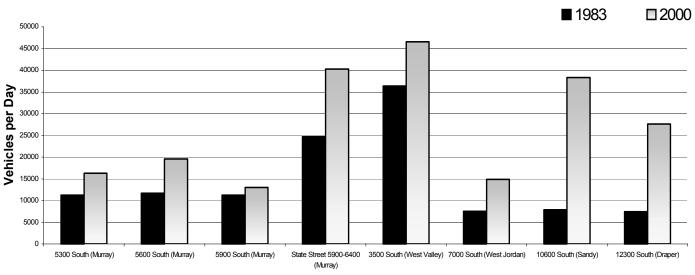
Street	1990 AADT	2001 AADT	% Change
I-15, 4500 to 5300 South	122,800	158,894	29.4%
I-215, I-15 Interchange	68,600	125,508	83.0%
State Street, 4500 to 4800 South	35,900	32,404	-9.7%
5300 South, 700 West to I-15 Interchange	22,300	29,816	33.7%
4500 South, 500 to 700 East	31,200	33,180	6.3%
4500 South, 700 to 900 East	22,800	27,625	21.2%
Van Winkle Expressway, 6100 to 6200 South	N/A	35,960	N/A
900 East, Van Winkle Expressway to 5600 South	25,900	29,770	14.9%
1300 East, 5600 to 6100 South	N/A	20,052	N/A
700 East, 4500 to 4800 South	30,500	30,875	1.23%
Winchester Street, 1300 to 700 West	9,400	17,295	84.0%
700 West, 5300 to 5900 South	12,300	16,790	36.5%
Fashion Blvd, 5900 South to Winchester street	9,900	18,590	87.8%
Murray Blvd, 4800 to 5300 South	10,300	29,255	184.0%
Murray Parkway Avenue, ~ Winchester Street	850	3,720	337.6%
Vine Street, 5300 to 5600 South	5,000	18,940	278.8%
725 East, ~ Winchester Street	8,600	17,655	105.3%
1300 West, ~ Winchester Street	7,100	11,060	55.8%
4800 South, Commerce Drive to State Street	8,700	13,820	58.9%
5300 South, State Street to Vine Street	11,800	16,395	38.9%
5600 South, Fashion Blvd to Vine Street	12,300	19,730	60.4%
5900 South, Fashion Blvd to 900 East	10,190	13,100	28.6%

Source: Traffic on Utah Highways, Utah Department of Transportation, 2001.

Murray City Transportation Plan, Parsons Brinckerhoff Quade & Douglas, Inc. 1992

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Figure 4-2
Traffic Volume Growth Comparison



Transit

Currently, Murray hosts three **light rail transit (Irt) stations**. Plans for commuter rail include a station in the Murray area. The three existing light rail stations are:

- 4400 South Murray North
- 5200 South Murray Central
- 6400 Fashion Place West

The majority of the areas of the City east and west of the light-rail and commuter rail corridor are connected to the corridor by bus routes along three major arterials such as 4500 South, 5300 South and Winchester Street. Figure 4-3 illustrates existing UTA bus routes and light rail stations with one-quarter and one-half mile radius walking zones.

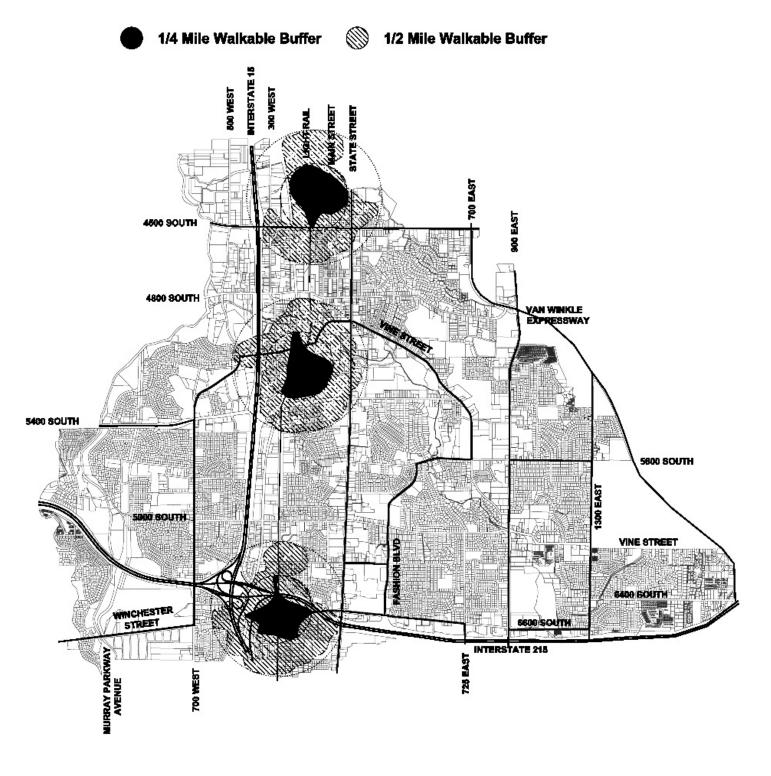
With existing light rail and future commuter rail serving the area, Murray residents currently have viable transit alternatives. Mode choice data from the preceding censuses indicate that the use of transit for work trips has increased marginally in the last decade. Table 4-2 illustrates mode choice of work trips for Murray and the rest of the state in 1990 and 2000.

Table 4-2 Mode Choice to Work

	1990		2000	
Mode Choice	Murray	Utah	Murray	Utah
Drive Alone	80.56%	76.65%	80.07%	78.77%
Carpool	13.45%	15.75%	12.11%	14.75%
Transit	2.60%	2.40%	4.69%	2.34%
Walk	2.14%	3.55%	2.48%	2.88%
Other	1.24%	1.65%	0.67%	1.25%
Telecommute	3.04%		4.70%	
Total	15,204	706,128	17,422	989,523

Source: US Census Bureau

Figure 4-3
UTA Bus Routes & Light Rail Transit Stations



As Table 4-2 indicates, transit ridership in Murray increased between 1990 and 2000. With the existing and expanding transit in Murray, and to minimize future traffic congestion, Murray City needs to take an active role in implementing transit options and compatible land uses within the city, offering Murray residents attractive alternatives to driving alone.

Traffic Signals

Figure 4-4 shows all existing and anticipated future traffic signals in Murray. As is evident from the map, most signals in Murray are owned and operated by UDOT, with Murray having little control over their function. Murray City has been proactively planning for future traffic signals given the functional classification of streets and the trade-off between circulation and land access. Future signal locations have been identified based on this trade-off to allow City planners to work with UDOT and other agencies providing transportation and land use supportive plans and policies. Future signals are identified for planning purposes only and shall not be implemented until traffic signal warrants are met and the signal operations can be further evaluated.

Railroad Traffic

Several at-grade rail crossings exist where the UTA TRAX light-rail crosses east-west city streets between I-15 and State Street. Other crossings in the same area are by freight trains on the Union Pacific railroad corridor.

Transportation Analysis

General Plan Priorities

Transportation is an important component in the General Plan priorities that have been defined for Murray. In focusing the city's priorities in the core commercial area between Interstate 15 and State Street, transportation facilities are critical to providing infrastructure to existing and planned large-scale commercial development. In identifying this as a core commercial area and focusing development here, it follows that it should be a priority area for transportation improvements as well, including both roads and transit.

Concentrating commercial and office development in this core area brings opportunities for increased concentrations of varying types of commercial development. For example, commercial development that follows office space includes restaurants, retail establishments, and specialty commercial such as dry cleaners, drug stores, etc. With these types of concentrated land uses, mass transit becomes an increasingly viable alternative for commuter to the area. In this pursuit of increased office development, mass transit, including both commuter rail and light rail transit, can be better utilized to offer commuters to the area an alternative form of transportation.

While concentrating commercial development in the core area of Murray, limiting commercial development in or near residential neighborhoods minimizes the need for increased traffic volume on residential streets. Collector streets serving residential neighborhoods should not be prioritized for improvement over regional-level priorities such as those associated with the I-15 to State Street commercial development.

Traffic Congestion

Traffic congestion was identified as a concern in addition to spillover traffic from major streets into neighborhoods. With the proposed construction of the Cottonwood Street corridor, commuter traffic will have north/south alternatives to Interstate-15 and State Street. This additional alternative should decrease the impacts of congestion-related traffic on local streets in particular, State Street and 700 West/Murray Boulevard.

Figure 4-4 Traffic Signal Locations



However, care must be taken in the commercial and residential development in-between I-15 and State Street to provide a transportation network that will not congest easily. More discussion of this is included in the recommendations section of this chapter.

In the future, the automobile will remain an important way of travel. To maintain mobility, land use and transportation policies must recognize the work, live, and play aspects of daily life and more efficient and accessible transportation options must be provided. To reduce both traffic congestion and the impact on the built environment, appropriate land use decisions must be made that help reduce the length and number of automobile trips. In addition, alternatives to the automobile that are efficient, accessible, and comfortable, can challenge the reliance on the automobile and further help reduce congestion on our streets. To further reduce congestion during peak driving times, employers should consider supporting telecommunications and different types of transportation than the car, car- or van-pooling, and alternative (to 8 am to 5 pm) work schedule programs.

Neighborhood Traffic

Concerns identified by the City related to neighborhood traffic included congestion on 5300 South east of State Street. While Table 4-1 illustrated that traffic growth is minimal on 5300 South east of State Street in comparison to other local streets, the street is reaching capacity for its present configuration. Murray residents have voiced concerns that widening 5300 South east of State Street would only increase traffic through neighborhoods and reduce their sense of community.

Cottonwood Street

The Cottonwood Street corridor is a proposed north/south community arterial to be constructed between I-15 and State Street. Starting at 7200 South and running north to connect with Vine Street just west of State Street. Several roadway and safety deficiencies exist in the area of the corridor on Winchester Street including five rail crossings within a 350-foot radius. The best alternative for improving these roadway and safety deficiencies would be to realign the 300 West and Cottonwood Street approaches to one intersection at the UTA Western Spur Track. Meyers Lane would then be relocated south to tie into the new Cottonwood Street alignment. These two improvements will reduce five rail crossings to three.

The new alignment for Cottonwood Street over 5300 South would include a longer bridge that would run between the Union Pacific Railroad and UTA Light Rail tracks, crossing UTA Light Rail just south of 5300 South and tying in to the new Vine Street alignment through a new connecting road, Woodrow Street.

Mass Transit

Rail mass transit in the Wasatch Front region is becoming a reality with two existing light rail transit lines and planning work continuing for additional lines and the environmental analysis for commuter rail from Ogden to Salt Lake underway. With three current light rail stations and a possible future commuter rail station, Murray will be impacted directly by these projects. While the majority of future traffic will be accommodated by cars, increasing emphasis should be placed on light rail transit and commuter rail.

With increased commercial development in Murray, better utilization of these facilities needs to happen, with planning for the area focused on these future sources of alternative transportation. In addition, in attempting to maintain existing and intact residential neighborhoods, greater emphasis on alternative modes of transportation is important in limiting impacts to residential areas.

The existing three TRAX light rail stations in Murray City may be better utilized by providing appropriate land uses around the stations to make them more of a destination than just as park and ride lots or transfer stations. With regional commuter rail, Murray City has a huge opportunity to become a suburban commercial destination for office development. The development of work destinations in suburban areas has created reverse commute riders who live in city centers and work in the suburbs. According to the Regional Commuter Rail Analysis prepared for Wasatch Front Regional Council, the Murray Central TRAX station at 5200 South is the most likely location for the interface between TRAX and commuter rail.

Transit Oriented Development

The anticipated land use surrounding the commuter rail station will be an important factor in determining station locations, and with new commercial development in the I-15/5300 South vicinity, surrounding land uses should be complementary to rail transit stations.

Transit-oriented development (TOD) refers to pedestrian-friendly land development activities that are built within easy walking distance of a major transit station. TODs generally include a compact mix of different land uses that are oriented to public walkways and automobile parking is minimized to promote pedestrian activity. Livable communities are neighborhoods that include a range of housing options, jobs, commercial services, and recreational opportunities all within easy access of transit services. These are communities in which residents, workers, and shoppers can get around without the need of an automobile.

Walkable Distances to TRAX Stations

Figure 4-3 shows the existing TRAX stations in Murray and areas within one quarter and one-half mile radius from the stations. These areas are prime locations for transit oriented development or high density and mixed-use development. Because these areas are so close to the existing TRAX stations, no transfers between bus and train are needed.

TOD Parking Standards

In support of a transit-friendly environment, managing parking is an often-used strategy to encourage transit ridership. While conventional parking standards are often conservative, even for peak hour demand, parking standards for transit oriented development decrease parking requirements, as more trips will be accommodated by transit.

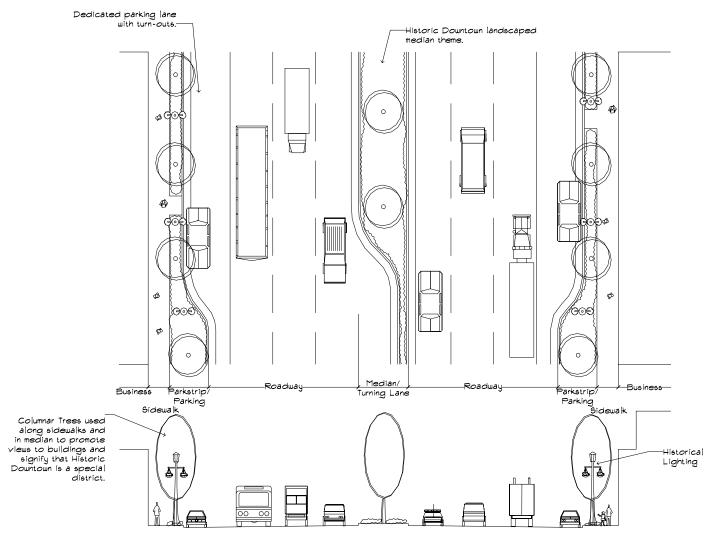
Mixed-use developments can help reduce demand for on-site parking with visitors being able to combine trips if the development area has several services to meet their needs.

Developers may be allowed to contribute monies as determined by Murray City to a parking improvement committee, to be appointed by the City and community business owners, which will use the accumulated funds to construct parking structures and/or parking lots that can serve several businesses. Parking structures should be located within reasonable distance, ideally within site distance, of the contributing businesses.

Land use within the vicinity of transit stations should be developed with great intensity in order to provide the most opportunity for transit ridership. Surface parking lots in transit-oriented districts should be targeted for redevelopment as parking structures, or as more-preferred transit-friendly employment or commercial centers.

In areas less transit-friendly, on-street parking should be considered to help accommodate the needs of specific adjoining residences or businesses. On-street parking studies are required in order to ensure capacity needs will be met for supplemental demand for off-street parking in adjacent areas. As illustrated in Figure 4-5, on-street parking in the Historic Downtown area will help attract visitors and shoppers to the area, and provide additional parking capacity for nearby and adjacent businesses. Additional on-street parking should be constructed by limiting the frequency of curb cuts. Other areas in Murray should be considered for on-street parking where land use and traffic characteristics would support it, or where the inclusion of on-street parking is a desirable amenity.

Figure 4-5
Section Illustrating Historic Downtown On-Street Parking Concept



Transportation Recommendations

North/South Core Area

The area between State Street and I-15 at approximately 5300 South is arguably the geographic heart of the Salt Lake Valley. Development opportunities anchored by the new IHC hospital are enhanced by the availability of vacant or underutilized land. Unfortunately, transportation systems have been challenged in this area, as parallel rail tracks and I-15 act as barriers to surface street crossings.

Cottonwood Street

Cottonwood Street has been proposed as a north/south community arterial that will help link this area to other areas east and west. Cottonwood Street is proposed to extend from north of Vine Street, west of Main Street, to the City's north boundary. An exact alignment would be determined through detailed environmental studies, which have not yet been conducted. Cottonwood Street will likely extend over 4500 South and connect to the existing sections of Cottonwood Street near the Murray Central TRAX station. Cottonwood Street will again span 5300 South, with funding included in the Transportation Improvement

Program of the WFRC for within the next 3 years, to the existing Cottonwood Street just west of the UTA TRAX mainline. Cross-section improvements will be necessary to enhance Cottonwood Street in this area to allow for adequate capacity to serve business development. On the south end of the City, Cottonwood Street will connect to Winchester Street and jog slightly west to tie into the existing Cottonwood Street south of 6400 South.

State Street

Traffic volumes on State Street declined in 2001 compared with volumes ten years ago due largely to improvements on I-15, which have lessened the role of State Street in providing regional traffic movement. However, State Street remains a State Highway and is under the jurisdictional control of the Utah Department of Transportation. Murray City should work closely with UDOT to determine the most effective ownership, management, and finance scenario, keeping in mind that State Street is an important facility to other municipalities in the Salt Lake Valley from Sandy to Salt Lake City and beyond.

Regardless of who controls it, State Street is an important component in Murray's downtown. As a result of I-15 improvements, decisions made with respect to State Street need to place more emphasis on the needs of the community, and less on those of the region. Amenities such as landscaping, curb bulb-outs, on-street parking, continuous raised medians, and other pedestrian amenities will enhance the community character of the place, while still allowing a capacity of 30,000 vehicles per day. Adjacent land uses should front State Street, helping UDOT to minimize the need for driveways and curb cuts in the area, while also helping Murray to cultivate a walkable, downtown environment. In addition, signal timing cycles should be adjusted to allow for increased pedestrian crossings.

A new signal is functioning north of 5300 South to serve the IHC hospital. This signal could also provide better access to the City Park, without increasing cut-through traffic through the park, by relocating the east/west park entrance farther south and constructing Cottonwood Street as an alternative to State Street. Another signal south of 5300 South to serve Murray High School should also be considered. Other longer-term issues on State Street may include changes to the road's cross-section to minimize north/south travel speeds. These changes may include reducing travel lanes to only two lanes in each direction in exchange for improvements in parking and pedestrian travel.

Other North/South Transportation Facilities

Outside of the core area between State Street and I-15, other north/south streets are also important to serve travel both within and through Murray. Regional corridors such as Van Winkle Expressway need to continue to serve regional through-traffic movements, and Murray City should work with UDOT to promote capacity improvements on this road consistent with projected increases in traffic volumes. 900 East is also a State Highway, but its value in providing development access and travel within Murray is as important as its traffic-carrying abilities. Therefore, Murray must work with UDOT to promote efficiency on this facility without eroding the ability of 900 East to serve as an asset to Murray City.

900 East

UDOT plans for 900 East include completing the widening of this road so that it is a consistent five-lane section. This cross-section tends to contribute to strip mall-type development, due to UDOT's policies related to side treatments within their standard 106 foot right-of-way. Murray can work with UDOT and take a more active role in promoting alternative land uses in the area, such as more pedestrian-friendly development. Beyond UDOT's plans, Murray should promote pedestrian and bicycle travel on 900 East as it serves as the most likely non-motorized north/south corridor east of I-15. In many of the commercial areas on 900 East, the UDOT standard 106-foot cross-section should be modified to replace the park strip with a wider sidewalk. In residential or transitional locations, Murray City should work with UDOT to

determine if additional right-of-way can be purchased to minimize the impacts of road widening on adjacent residents.

700 West

Like 900 East to the east, 700 West serves as the predominant north/south travel corridor west of I-15. This corridor is complemented by the Jordan River Parkway trail system so that non-motorized travel is less important. Similarly, land use is generally less intense along this corridor than on 900 East, but emphasis must continue to be placed on land access. Spot intersection improvements, particularly at the major intersections of 5900 South, 5300 South, 4800 South, and Winchester Street should be considered along 700 West.

East/West Corridors

There are many east/west corridors east of State Street through Murray City. On the north side of the City, 4500 South serves as the predominant regional facility, and on the south side of the City, I-215 serves a major regional role. In between these two facilities, no single facility carries significantly more traffic than another, and none of them have seen increases in traffic volumes to the same degree as other facilities in the Salt Lake Valley (Figure 4-2) over the past 17 years due to relatively stable land use patterns on the east side of the Salt Lake Valley.

Murray should work with UDOT and the Wasatch Front Regional Council to raise the priority of the 4500 South railroad bridge. As it currently exists, this is a bottleneck immediately east of the I-15 interchange and contributes to significant traffic congestion in the area. In addition, Murray should support plans to widen 4500 South in order to continue to facilitate regional travel. This may include widening to three lanes in each direction between I-15 and State Street and constructing Cottonwood Street as an overpass without signalized access to 4500 South. In general, Murray should preserve existing neighborhoods at the expense of added east/west traffic capacity between 4500 South and I-215. An opportunity may exist to allow 5300 south to operate as two lanes eastbound and one westbound and 5600 South to operate as two lanes westbound and one eastbound. Both streets could primarily stay within the existing right-of-way so that east-west travel could be facilitated through a couplet system that remains sensitive to the neighborhood concerns but increases capacity consistent with small growth in demand.

Mass Transit

Consistent with and in addition to augmenting the street system in the north/south core area, Murray should work to strengthen both the existing TRAX light rail and the proposed commuter rail systems between State Street and I-15. At the Murray Central Station, Murray should partner with UTA to promote joint development of the light rail and planned commuter rail parking areas. "Transit friendly" development in this area will allow the large space for parking to be more pedestrian accessible. Continued transit friendly development should be promoted east of this station to allow pedestrian access to shopping opportunities near State Street. A bus or van shuttle system should also be considered as a circulator between major generators so that IHC Regional Medical Center, State Street, and the historic district in particular, may be more accessible to the light rail and commuter rail opportunities.

Similar opportunities exist at the Fireclay and Fashion Place West TRAX stations. A proposed TOD near the Fireclay station is contingent upon improved roadway access. Murray City should work with UTA to explore access options and should consider an upgrade of existing east/west commuter rail crossings in the area north of Fireclay. Land uses are more constrained at the Fashion Place West station, but Murray should also work with UTA to allow for improved crossings of Cottonwood Street to the TRAX line using possible Mid-Jordan TRAX extension funding.

Goals and Policies

Goal Provide Murray residents with an efficient and functional system of streets.

Policy Make Cottonwood Street a north/south community arterial that will help link the core commercial area to other areas east and west.

Implementation Measure: Extend Cottonwood Street north of Vine Street, west of Main Street, to the City's north boundary. An exact alignment will need to be determined through detailed environmental studies.

Implementation Measure: Extend Cottonwood Street over 4500 South and connect to the existing sections of Cottonwood Street near the Murray Central TRAX station.

Implementation Measure: Cottonwood Street should span 5300 South, with funding included in the Transportation Improvement Program of the WFRC for within the next 3 years, to the existing Cottonwood Street just west of the UTA TRAX mainline.

Implementation Measure: Make cross-section improvements to allow for adequate capacity to serve business development.

Policy Murray City will work with UDOT to capitalize on the reduced emphasis on State Street to serve regional traffic by making State Street better serve pedestrians and direct access to properties.

Implementation Measure: Murray City will actively pursue a cooperative relationship with UDOT related to changes and improvements on State Street. This might include considering a change in ownership, pedestrian improvements, signal timing changes, or any combination of these items.

Implementation Measure: A new signal is functioning north of 5300 South to serve the IHC hospital. This signal could also provide better access to the City Park, without increasing cut through traffic through the park, by relocating the east-west park entrance farther south and constructing Cottonwood Street as a reliever to State Street.

Implementation Measure: Another signal south of 5300 South to serve Murray High School should also be considered.

Policy Maintain regional transportation corridors to serve regional through traffic.

Implementation Measure: Murray City should work with UDOT to promote capacity improvements on 900 East consistent with projected increases in traffic volumes.

Implementation Measure: Murray should promote pedestrian and bicycle travel on 900 East as it serves as the most likely non-motorized north south corridor east of I-15.

Implementation Measure: Spot intersection improvements at major intersections on 700 West such as 5900 South, 5300 South, 4800 South, and Winchester Street should be considered.

Policy Murray should preserve existing neighborhoods in favor of added east/west traffic capacity between 4500 South and I-215.

Implementation Measure: Murray should support UDOT's plans to widen 4500 South so that this road can continue to facilitate regional travel. This may include widening to 3 lanes in each direction between I-15 and State Street and constructing Cottonwood Street as an overpass without signalized access to 4500 South.

Implementation Measure: Explore the possibility of allowing 5300 south to operate as two lanes eastbound and one westbound and 5600 South to operate as two lanes westbound and one eastbound, or other alternatives that will help to preserve existing residential neighborhoods.

Goal: Increase mass transit options in Murray.

Policy: Murray should work to strengthen both the existing TRAX light rail and the proposed commuter rail systems between State Street and I-15.

Implementation Measure: At the Murray Central Station, Murray should partner with UTA to promote joint development of the light rail and planned commuter rail parking areas. Developing transit friendly development in this area will allow the large space for parking to be more pedestrian accessible.

Implementation Measure: Continued transit friendly development should be promoted to allow for pedestrian access to shopping opportunities near State Street.

Implementation Measure: A bus or van shuttle system should be considered as a frequent circulator between major generators.

Policy: Explore opportunities at the Fireclay and Fashion Place West TRAX stations.

Implementation Measure: Murray City should work with UTA to explore access options at the Fireclay station and should consider an upgrade of existing east/west commuter rail crossings in the area north of Fireclay.

Implementation Measure: Murray should also work with UTA to allow for improved crossings of Cottonwood Street to the TRAX line using possible Mid-Jordan TRAX extension funding. This will provide Murray City an opportunity to re-evaluate land uses in the vicinity to determine if they are appropriate to new crossing/intersection configurations.